The Surrey Amateur Radio Club

Communicator

April
2017

TM100VIMY

SURREY
AMATEUR RADIO CLUB

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At The Last SARC Meeting

General Meeting Minutes

Wednesday, March 8 2017

Stan Williams welcomed everyone to the meeting. 25 members were in attendance as per the sign-in sheet.

Announcements

A get-well card was circulated for Surrey Councillor Mary Martin who is currently on leave from council for health reasons (Mary Martin was instrumental in SARC being granted use of the OTC). It was also noted for the information of all that Jim Smith VE7FO's wife is in hospice.

Stan VA7NF advised that SARC has been invited to participate in Richmond ARC's event on April 8th, which has the objective of making radio contact with the TM100VIMY station in France. SARC will work with the Burnaby Club to set up a station in Richmond, by contributing use of our 100 ft. "Bigfoot" tower and tri-band 7-el beam. The event will be held at South Arm United Church on the corner of #3 Road and Steveston Highway.

Membership

John VA7XB advised that membership currently stands at 116.

Communicator

John VE7TI advised that, as always, he requires input from members to include in the Communicator.

QSL Manager

Heinz VA7AQ, reported that all QSLs are up-to-date, including Logbook of the World. He noted that application to LOTW must be made to include other callsigns in use by the club, namely VA7SRY and CG7SAR, as they are currently not recognized by LOTW. Stan VA7NF requested that Heinz do so. Heinz also noted that we do not currently have QSL cards for either of these callsigns, to which Stan advised that the question of preparing new cards would be discussed by the Executive.

Operations and Training Centre

Regarding the OTC, John VA7XB reported that discussions have been held with senior personnel at the Gaming Grants Branch. John VE7TI and John VA7XB will have another discussion with them and will report back to the membership next month with a recommendation.

No progress has been made regarding our on-going request for repair of the HVAC system and investigation of high RF noise at the OTC.

Regarding the equipment auction, Sheldon VA7XNL stated that most of the items have been sold to members and $583 was raised. Stan VA7NF reported that the few items remained after the auction were taken to the Burnaby Swap meet and netted $21.50 v the cost of table rental of $31, with the deficit to be considered "advertising". Any unsold items will be made available free to members.

Net Manager

Regarding the net, Rob VE7CZV stated that he can no longer act as net manager and a replacement will have to be found. Sheldon VA7XNL noted that additional net control operators are needed.

Repeater

Sheldon VA7XNL advised that he has not yet had time to visit the repeater site and investigate recent complaints about "echoes" during linking of our repeater to the Abbotsford repeater through IRLP.

Website

No report was available due to absence of website manager, Jeremy VE7TMY.

Contest Group

Sheldon VA7XNL reviewed recent participation in contests, specifically the VE100VIMY/VE7 event (not technically a contest), the NA QSO Party and the ARRL DX SSB contest.

Field Day

Stan VA7NF noted that the FD committee had not come to agreement over the fundamental question about FD, namely – should it be at the OTC or in the field? After discussion of the pros and cons and hearing the opinions of members, a vote was taken regarding preferences. The result by 8 to 5 in favour of holding field day "in the field". Considering that a field operation involves considerably more work, the planning committee will require a higher level of participation than it presently has. Sheldon VA7XNL noted that if we have insufficient help in planning and implementation, then some or all of the bonus point activities will be dropped from the effort.

Financial

Scott VE7HA reported on current bank balances in various accounts.

Foxhunt

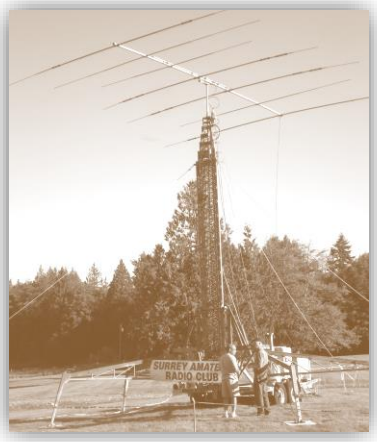
Anton VE7SSD reviewed plans for the foxhunt to be held on May 20th at Crescent Park in South Surrey, for both 80m and 2m. He has been in touch with Les Tocko VA7OM of BC Radio Sport to make arrangements.

Presentation

After a coffee break, Kevin McQuiggin VE7ZD made an excellent presentation on Gnuradio describing the fundamental concepts, his struggles to master this new digital technology and a live demo. His presentation slides are given elsewhere in the Communicator. He emphasized that although the technology appears daunting, anyone who has completed the basic licensing material is capable of mastering Gnuradio and making it work. Thanks was expressed to Kevin for his stimulating talk.

The meeting was adjourned at 2105.

Minutes prepared by John VA7XB in absence of Secretary, Jeremy VE7TMY.



The **SARC Communicator** is published monthly except July and August for members of the Surrey Amateur Radio Club.

To subscribe, unsubscribe or change your address for e-mail delivery of this newsletter, notify **SARCcommunicator @ ve7sar.net**

Non-members living in the Greater Vancouver area are asked to subscribe with a $5 annual donation towards our Field Day fund.

SARC maintains a website at **www.ve7sar.net** and a Media website at **docs.com/surrey-amateur-radio-club** that includes past issues of The Communicator, club history, news, photos, videos and other information.

On The Cover…

April 9 marks the 100th anniversary of the battle of Vimy Ridge. The battle was the first occasion when all four divisions of the Canadian Expeditionary Force participated in a battle together and it was made a symbol of Canadian national achievement and sacrifice, although at great human loss.

The event will be commemorated by Amateur Radio with a special event station located approximately 2 km away from the memorial, at Vimy summit level. This amateur radio station with the call sign TM100VIMY, will operate from April 1 to April 9, 2017. There will be two stations and suitable antennas working on a 24 hour basis. The event is being organized by the Vimy Commemorative Station Society, a registered in British Columbia Society, in coordination with a number of leading Canadian amateurs.

At The Last SARC Meeting

GNUradio: Almost Free SDR

Kevin McQuiggin VE7ZD came to the March meeting to present GNUradio. What is GNUradio? It is an open-source free software package for all major platforms that represents common radio components as blocks, much like the block diagrams you studied for your basic exam. They are assembled and linked together to form receivers and transmitters, referred to as "flowgraphs" in GNUradio.

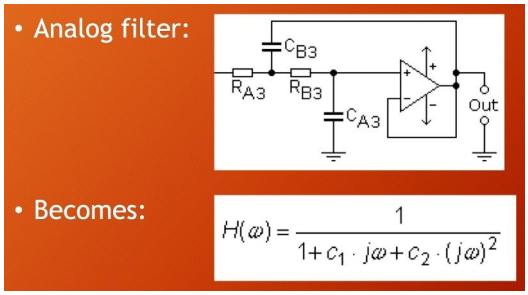
How does it work? Radio signals are always "analog" (electromagnetic waves), of course, so an analog "receiver" is still necessary. This is where a cheap $20 USB dongle comes into the picture. These receivers analyze the electro-magnetic spectrum and immediately digitize it. The "numbers" are then streamed to the digital radio processing chain. The math defines signals precisely: AM, FM, SSB, PSK, et cetera. Math can then process these digitized signals to substitute, with much greater accuracy than analog radios, the various blocks of the receiver including mixers, filters, amplifiers, et cetera, and you don't need math skills.

As with much radio innovation in history, hams are at the forefront and your imagination can allow building general coverage all-mode receivers, Cell site emulators, Radar transceivers and Aviation applications, to name just a few.

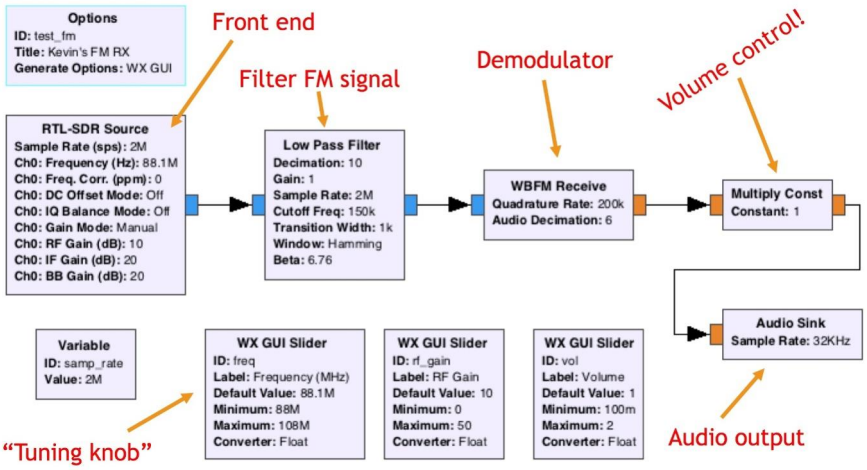
Kevin demonstrated a basic FM broadcast receiver in class and showed a video of contacts he has made with Inmarsat, decoding that satellite's data.

This is a remarkable program, the operation of which should be within the grasp of any ham with a Basic license.

Kevin has offered a GNUradio workshop for SARC. Interested? eMail to:
Communicator@ve7sar.net



A most interesting presentation. Above, Kevin VE7ZD and the presentation. Right, an illustration of a GNUradio filter and an FM broadcast receiver



HAM NEWS

Tidbits from the Amateur Radio World

Cover Girl Climber Shot Could Send High Schoolers To Their Death

The March issue of the ARRL publication QST will most likely latch onto the literal lunacy award for depicting in a photograph the most egregious tie-off violations one could imagine.

In QST's March edition, their antenna issue, the cover shows a picture of Chase Mertz of Eldorado, Tex. climbing a tower while working on a project with the Eldorado Space Program, an Eldorado High School program that teaches students to design instrumentation packages and launch them into space, according to the magazine's cover notes. Unfortunately, it illustrates an unacceptable tie off procedure that could easily launch students off of a tower to their deaths. Professionals will easily identify the host of 100% fall protection safety violations that are pictured such as an improper dorsal assembly system with an unacceptable knot that has its trailing end tied off with cable ties.

ARRL should know better than to promote such an unsafe photograph, recognizing that many of their members are now silent keys after they fell from a tower. The photograph was provided by the Eldorado Space Program which is troubling since educators are allowing their students to engage in dangerous and possibly deadly activities.

The program identifies their members as The League of Extraordinary Space Cowboys. Ironically, cowboy is a term given to early industry climbers that disregarded safety disciplines and fell to their death.

ARRL Chief Executive Officer and QST Publisher Tom Gallagher, should reach out to the National Association of Tower Erectors and they will in all probability provide timely and accurate information for an upcoming QST edition regarding the need for the observance of professional climber safety precautions while working on ham radio structures.

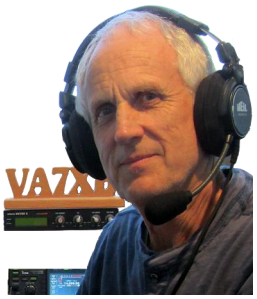
He should also contact the space program's student advisor, teacher Paul McWhorter, to immediately stop any of the group's members from climbing towers.

On the group's Facebook page, a post said: "Space cowboys took some time from their development work on EAGLE VI to climb the KLDE radio tower in Eldorado. The tower has the 2 M repeater the team uses to communicate between mission control and the chase crew. Danny Boyer taught the students how to safely scale a 300 foot tower. The students were introduced to all the latest safety equipment and climbing techniques. The space program introduces the students to many skills few High School students get to experience.

How many safety errors can you find in this picture?

The Contest Contender

John Brodie VA7XB



Where Are Those Sun Spots?

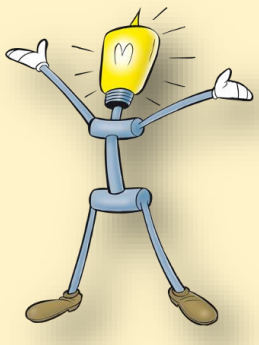
Abbas Capri (Bas)
JL. Maleo No. 1 HBM Remu Utara
Sorong City - West Papua 98416, Indonesia

With current sunspot activity at virtually non-existent levels, DX was hard to find in the BARTG RTTY contest which is usually gets heavy participation by DX from all corners of the globe. Really the only good band during the day was 20m, but 40 came alive somewhat during the evening. A few Europeans showed up briefly mid morning on both Saturday and Sunday, but after that it was mostly the USA, Caribbean and east Asia (JAs). Only one rare jewel was found amongst the more garden variety DX... YB9WIC in West Papua, Irian Jaya, Indonesia. We did also hear 5U5R in Nigeria, who was working split, but copy was so poor that no effort was made to work him.

2017 Richmond Amateur Radio Club Annual Swap Meet

Sunday April 05 2017 South Arm United Church on 11051 No. 3 Road (southwest corner at Steveston Hwy.) in Richmond, BC from 9 AM to 1 PM. General admission is $5

- To date we have confirmed door prizes from: ICOM Canada, Radioworld, Burnaby Radio, RP Electronics and Richmond Emergency Programs.
- We are expecting a display of communications vehicles and/or emergency equipment from the City of Richmond, City of Burnaby, Coquitlam ARESS (VE7SCC), Surrey ARC, Abbotsford AR Emergency Services Society, and The Salvation Army.
- Burnaby ARC will be coordinating with Surrey ARC to set up a radio station on site for the public to contact TM100VIMY at Vimy Ridge in France.
- Radioworld has also made a special offer to all swap meet attendees to include free shipping (in Canada) for transceivers purchased between April 8th and April 30th. Please visit our club's event Web site at www.richmondarc.ca for ongoing updates on the swap meet and PayPal payment for vendor table reservations.



The Contest Contender

Robert Fishwick VA7FMR

Digital Set Up And Its Ups And Downs

Hi, I am VA7FMR And I am relatively new to the Ham World. I got my licence 16 months ago in November of 2015. You may remember my article about antennas and the problems and solutions to making a selection. I have progressed since then and have enjoyed making contacts around North America with my screwdriver Antenna installed on my patio rail.

This is the thing that I like about being a HAM operator, there are so many ways that you can have fun. For example, CAT control of your radio, or "Computer Assisted Tuning" of your radio. Now what could be more interesting than that. You just watch your frequency board in N1MM+ for example and Telnet puts up all of the new contacts that are on the air right now. Just click on one of the items listed on the board and the computer tunes your radio for you, contact made. If on the other hand, you turn your radio knob, the frequency board changes too. How neat is that? And what do you know, this leads us into the next exiting part of HAM radio, Digital Communication.

I was talking to one of our senior club members one Saturday morning and he asked me if I would like to join him at his radio shack to have a look at Digital Contesting. I came away from that morning thinking about all of the contacts we had made with just the push of a button. So again, just like my search for antennas when I first got my licence, I started searching for digital interfaces to hook up to my radio. Unfortunately, I did not learn a lesson from my antenna problems, I just went ahead looking for what I thought would be the best bang for my buck, big Mistake. Since I also have an interest in Morse Code, an advert caught my eye on a web site based in the UK. It boasted that not only did their little black box provide CAT control but it also, in one box, provided two more of what I wanted, digital and CW. I can not of course provide the Manufacturers name of this mistake but I can tell you that it took a long time to realize that this unit did not live up to its claims. I struggled for weeks trying to make this beast work. The instruction manual, if you could call a photocopy of 6 sheets stapled together a manual, told me that when the USB cable from the unit is plugged into the computer, 3 com ports are assigned to the unit. It is easy to find out which com ports are assigned by using Windows Settings and then Device Manager to look at the com port numbers. Mine were 3-4-5. The manual told me to run a piece of software on his web page and it would look at the interface and tell me which com port was the CAT control com port. The software told me that CAT was on COM 4. Off I go to N1MM+ logger and in the setup window I tell N1MM that CAT is com 4 and I go through the setup procedure and look to see CAT working, not on your life. My Band Map stubbornly refused to talk to my radio. This was the start of a six week love and hate relationship between a black box and a very frustrated me. I went on the internet and found instructions that pretty much guaranteed to get you working. I had just replaced the four ink cartridges in my printer and I printed so many documents I ran out of ink in just the first two weeks. The paper and ink Manufacturers loved this black box but I disliked it with a passion. On a whim, I went back into the setup of N1MM+ and told it that I was sorry

The paper and ink Manufacturers loved this black box but I disliked it with a passion.

Well, was there a lesson learned here? There sure was but I should have learned it after my antenna fiasco

but could I try another com port for CAT Control and I input COM 5 and did the setup thingy again and give that man an orange, it worked. I had CAT control. How could this be? The black box manufacturer told me that CAT was com 4 but here was my black box working on com 5. well winners can't be losers can they? On I went to get started in digital communications. I downloaded MMTTY and FLDIGY. In many of the documents I had downloaded I was told to setup MMTTY as a stand alone entity first. So, that is what I did. Since I had been told by the black box provider that com 3 was digital and com 5 was CW, I started the MMTTY installation with com 3. When setting up MMTTY, there are about 15-20 things that can be changed, one of the downloads gave me a pretty good inclination of what to set and what not to set. Having done the deed I tried MMTTY and nothing happened, no digital for me. Now I think you can see where I am going. If CAT was wrong at the black box, could it not follow that the manufacturer was wrong with the other two com ports. Sure enough, after several more days chasing my tail, I got MMTTY to trigger the black box using COM 4 not 3 as the black box manufacturer had stated. It was now time to incorporate all of this junk into N1MM+, you guessed it, not a chance in hell. Although CAT control worked fine the black box did not want to talk about Digital to anyone but it's self. Throughout this debacle I had been in constant contact with John Brodie, now this guy has the patience of a very very patient man. He gave me lots of encouragement and when I felt like wrapping the black box around the refrigerator he came through with calm and patience. A few days into this saga, John had produced a Signalink USB device and suggested that I might like to try it. I wish that I had done as he asked day one. I was now at my Nieces house and had installed My 73' long wire antenna. I was going to be here looking after dogs and house whilst the family were away on vacation. The antenna was working like a charm and the BARTG digital contest was due to start in two days. I removed the dreaded black box and installed the Signalink and left it like that until the next day, I had to recoup my own patience quotient and recharge overnight. The next day I had MMTTY talking nicely to the Signalink, incorporated it into N1MM+ and after a false start and a recheck of settings my Icom 7100 went into transmit and I were a digital man at long last. I worked the contest over two days, total about six hours or less and I logged 80 Qso's, including 8 Japanese stations, 1 Mexican station and a Hawaii station for good luck. The remainder were in Canada as far away as Ontario and the United States as far as Connecticut and Florida. I had a ball, I can not impress upon you how good it felt to log stations thousands of Kilometres away.

Well, was there a lesson learned here? There sure was but I should have learned it after my antenna fiasco. Do not go after the super fancy stuff and certainly never rely on a supplier off continent. I read on a public web page that the manufacturer of my unit thought that people who called for installation advice were stupid and inevitably hung up on the caller, what kind of after sale service is that? I can call anywhere in Canada for free on my Cell Phone so that is as far as I should have looked. After sale service is extremely important, particularly to newcomers to the hobby like me and some of you out there. KISS, Keep it simple stupid covers the above problem very well. Have I learned my lesson, I hope so.

73

~ Robert VA7FMR

Club News

What's Happening Outside Surrey?

Right: Stan and Sheldon at the SARC table.

The **Burnaby Amateur Radio Club** annual HamFest was a success, as usual. Attendees were able to pick though a treasure trove of Ham goodies. SARC was well represented with a table staffed by Stan and Sheldon. They were able to clear the remaining items donated in the past year.

The **Richmond Amateur Radio Club** is also busy planning their event. They received some welcome media attention with an article in the Richmond Review. The president of the Richmond Amateur Radio Club, Urey Chan, commented that: "Amateur Radio is a hotbed of activity and growth", perhaps hard to believe when local repeaters are as quiet as they are. Read the full article at http://www.richmond-news.com/community/hotbed-amateur-radio-waves-getting-bigger-1.12737507.

SARC has been asked to provide our 'Bigfoot' tower for the event and with the Burnaby Club there is a joint plan to attempt a contact with the VIMY special event station operational at that time. Hopefully propagation cooperates.

Listen on the air for XO1X, on the air now and for the remainder of 2017 from Canada's Yukon Territory. The special call sign prefix is permitted as part of Canada's sesquicentennial celebration, as is XK150YUKON, another **Yukon Canam Contest Club** call sign for the sesquicentennial, operating VY1JA remotely. Operators will include Gerry Hull, W1VE/VE1RM, Cary Rubenfeld, VE4EA, and others.

"The XO1 prefix has not been on the air in 35 years," Hull told ARRL. "My friend Andy, VE9DX, last put it on the air as XO1ASJ." That prefix block was subsequently moved to Yukon Territory, he explained.

Radio-Active

Geoff Higginson VA7HIG

Profiles of Active Area Hams

Bill Dick VE7IKX

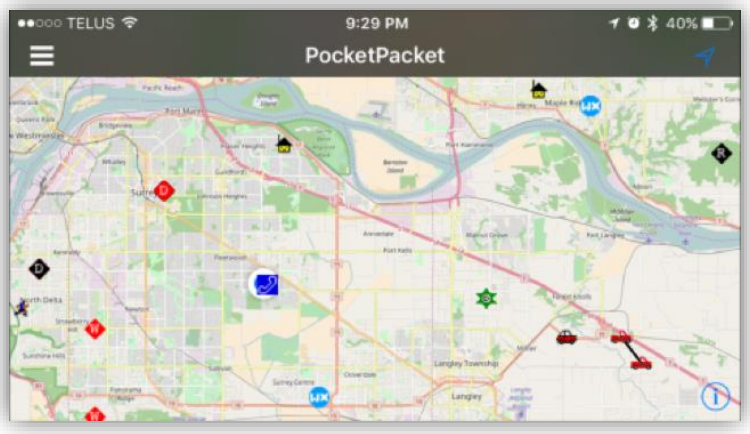
The Ham Behind "Fleetwood Digital Products

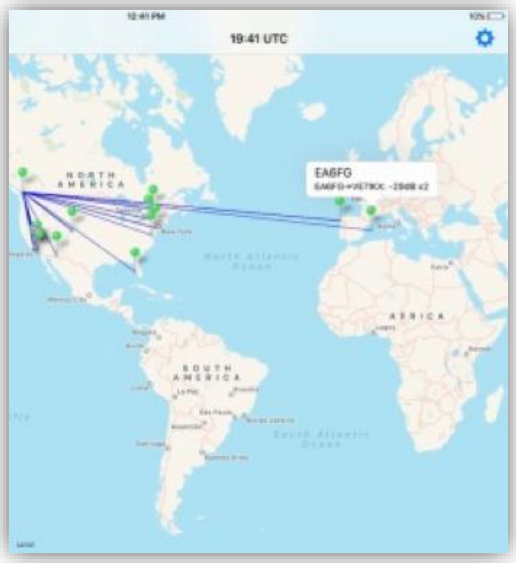
Very few Ham's haven't received a radio signal courtesy of Fleetwood Digital Products Amateur Radio gear. For more than seven years now this "home brewed" company has been growing its line of amateur radios, products, accessories and other offerings to local radio enthusiasts. Starting out modestly with iPad/iPhone accessories, Fleetwood Digital stocks one of the largest inventories of Wouxun and TYT Chinese radios and accessories in Western Canada and now with its latest addition a line of Wouxun and TYT Digital Handy Talkies.

Bill Dick, VE7IKX, a licensed Amateur for more than 25 years, and along with his bride, is the man behind the scenes at Fleetwood, working his day job in consumer electronics and filling his evenings and *weekends* promoting and operating the on-line store and attending Ham Swaps, the next in Richmond April 8. http://www.richmondarc.ca/swapmeet2017.html

Bill and I sat down and reminisced about his early beginnings in Ham Radio and electronics, growing up in North Delta with Dad VE7FKY and Mom VE7IKY. Bill's earliest experience with Amateur Radio was turning the big frequency dial on his dad's Heathkit HW 8 past zero, necessitating a quick repair and calibration by dad. It was about the same time, at age four that he discovered his interest and talent in computers with his TRS 80 Computer around 1980. Early on, before sound cards were common place Bill created a network of resistors to interface with his computer's parallel port allowing him to play computer MOD files to his stereo. Living in a family apartment until he was six, even then his dad had a five band vertical between the outer walls of the apartment and so Bill was exposed to HF communications from the beginning.

Licensed around 1990 Bill, Basic with Honours, first went on the air with his Alinco two metre hand held. Later from his family home in North Delta he had a mag mount antenna outside hooked up to a dumb terminal for a packet keyboard and monitor. His PK 88 was hooked up to the Heathkit two metre handheld on FM. He was in to WA State in packet. At that time the nearest repeater was RSL in Surrey.





Involved early on with D-Star, Bill now carries a Kenwood TH D-72 with APRS that beacons on his commute to and from his 9-5. He also runs Weak Signal Propagation Reporting (WSPR) and JT-65 digital modes on the base at home. This allows him to report stations from all over North America, and the world, passing them to his iPhone app, pictured below. While Bill has little time to key up the mic, this allows him to "play radio" from almost anywhere. WSPR Watch allows him to SWL other WSPR Stations and to see who picks up his signal. This app is working hybrid as the HF Radio at home is picking up the spots and then uploading them to the internet where they are downloaded to his i-Phone. "PocketPacket" on the right below allows APRS from the phone.

Some of Bill's most memorable moments as a Ham were when his family home had an unfortunate fire and they had to rebuild the ham shack. At the time using an Icom 703 with matching portable antenna pushing ten watts he made it into Ontario and the Yukon for a RAC Winter Day or Canada Day. In his Dad's shack he remembers always hearing Japan but never anything out of Europe, then one day he put out a CQ and got a return QTH deep in Europe. It was quite an exciting contact and he paused he was so surprised to get in.

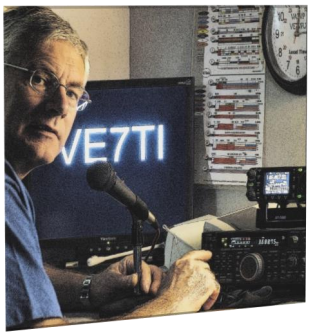
Bill's shack is now in his office where he runs a Yaesu 747GX with matching power supply and antenna tuner feeding one hundred watts to a 20 metre dipole along the ceiling of his office with a four to one balun. Most recently he has made contact into New Zealand on SSB and spends a lot of time working with JT 65, a digital mode that handles extremely weak signals. JT 65 takes fifty seconds to send thirteen characters of text followed by 10 seconds to decode the transmission. QSL cards from Russia, Alaska, South America, and Japan line his shack, proving that you don't need a large setup, or even a permanent outdoor antenna to chase DX.

With so much activity filling every day, Bill would love to get into working with the "Raspberry" but barely has time to enjoy his hobby of collecting Hockey Cards. The mystique of picking up a pack of cards at the Dollarama and seeing a Winnipeg Jet or Quebec Nordiques card is very nostalgic for him.

His family-run company also carries GMRS, CB, Land Mobile and Marine VHF Radios as well as a full selection of test equipment, antennas, connectors, adapters and other great radio accessories.

Check out Fleetwood Digital Products' ad on the back cover of the Communicator or look for Bill at the Richmond Swap April 8 at the South Arm United Church at the corner of Steveston Highway and No. 3 Road, 9 a.m. to 1 p.m.

~ Geoff VA7HIG



QRM

...from the Editor's Shack

Do you have a photo or bit of club news to share?
An Interesting link?

Something to sell or something you are looking for?
eMail it to SARCcommunicator @ outlook.com for inclusion in this column.

Another Basic Class Has Started

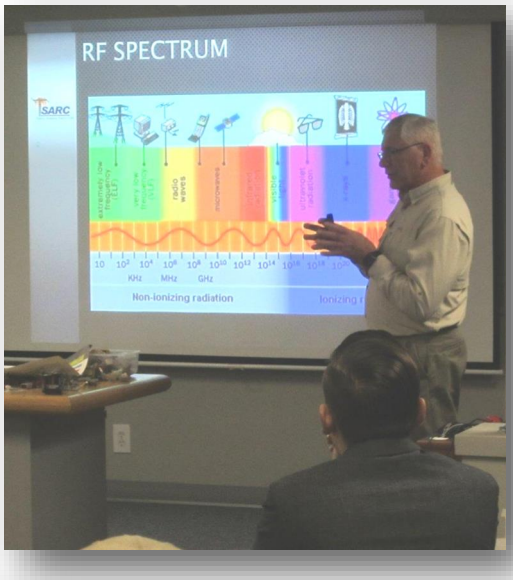
Getting Licensed For A Variety Of Reasons

To assist you getting to the 'right' person, we have some new contact addresses:

president@ve7sar.net
vicepresident@ve7sar.net
secretary@ve7sar.net
treasurer@ve7sar.net
communicator@ve7sar.net
webmaster@ve7sar.net
repeater@ve7sar.net
membership@ve7sar.net
directors@ve7sar.net

March signaled the start of our Spring 2017 Basic Amateur Radio licensing class. We have 22 students registered from a variety of backgrounds and interests. As usual we start session one with introductions and it was notable that many of those taking the course did so because of their interest in emergency preparedness. Hopefully this will translate into an influx of new blood for the Surrey Emergency Program Amateur Radio (SEPAR).

As in the past, John VA7XB has taken on the course coordinator role with John VE7TI and Stan VA7NF as instructors.



The final exam will be in mid-May with the included, and popular, Antenna Building Workshop spread over two Saturdays at the OTC because of the large number of participants.

We again thank the Surrey Fire Service for the use of their excellent classroom facility.

Page 13—News You Can Lose

The Lighter Side of Amateur Radio

XYL Pushes For 75 meter Upper Sideband

By WBØRUR, on the scene

SCHENECTADY, UTAH – In an unprecedented operating decision, Wyandott County amateur radio operator Angelina McFarland says she will begin working 75 meter phone exclusively on upper sideband next month.

"It's something I've been thinking about for a long time," says the 62-year-old grandmother of five. From her log cabin in the Wasatch Mountains, McFarland says it's time to take action and "be the change I want to see in the world."

"In the 60's, I was burning my bra on Main Street, marching on Washington and joining my friends in other forms of civil disobedience. This seems like a logical extension," she says, arranging her flowing rainbow colored robes.

Brown rice cooks on the stove as the sound of a sitar recording echos through the two room cabin, which is hewn from locally harvested logs.

She pushes back the "love beads" which separate her living room from the entrance to her ham shack to display her gear for reporters.

"A few months ago, I fought the expansion of a big box store in downtown Pagosa Springs… and I won!" she exclaims. "Now I need a new cause. And The Man has been holding back 75 meter upper sideband for too long."

~Ham Hijinks

Seems safe…

Light travels faster than sound.
Which is why some people appear bright
until you hear them speak….

Tech Topics

Troubleshooting Antenna Traps

More Info?

http://www.zl2al.com/1628/1628/

The writer points out his issues with his antenna…

I'm having issues with my R7 HF Yagi. The SWR is 1.8 or 2.0 only on 10 meters, the rest of the bands are off the chart. My R7 is from 1992 but I can't find the proper manual and can't even find a photo of my exact R7 model. For all I know the traps and caps are mixed up. In another manual it says make sure the arrows point up on the traps but they are long gone. how do I connect a MFJ259 analyzer to the traps to test them? Also the match network? Any help would be great as would any supporting web sites. Finding the right manual would be great too. Thanx

Trap Troubleshooting

On the AP-8 antenna, check the connections at each trap. Is the ground screw tight? Are the screws tight at each strap connecting the radiator tubing to the capacitor tubing? A poor connection at any of these points will cause that trap to be detuned and result in poor VSWR on the band for which that trap was tuned. If you have the AV-5 antenna check each trap to insure that the cover is tightly secured. The cover is the 1 5/8″ aluminum tubing over the coil. On top of the cover is a plastic cap. Any movement of the cover will cause intermittent VSWR conditions on the antenna. You may test for a loose cover easily while the antenna Is still assembled. Grasp each trap in your hand and apply a moderate amount of pressure in a clockwise and then in a counter clockwise direction about the axis of the element. If the cover slips It will require tightening. A hex head screw Is at the base of the trap. Tighten this screw with an appropriate screw driver or spintite. Be careful not to apply so much force as to strip out the sheet metal screw. If the hole is already stripped, or gets stripped accidently, it is an easy matter to fix by substituting a #10 x 3/8″ or #10 x 1/2″ self tapping screw in the enlarged hole, If all your traps pass the mechanical test, and seem to be installed properly, then a frequency check is in order. The traps should be marked before removal so that proper re-assembly is assured. Remove all of the traps and bring them Indoors for inspection. A list of Cushcraft traps and resonant frequencies are presented below, so that you can check to see if a trap is near the frequency to which it should be

A Typical weathered HF antenna trap shown without its sleeve

tuned. Use as little coupling as possible so that the dip oscillator Is not pulled in frequency. Use a frequency counter or receiver to determine the frequency of the dip oscillator. (Nowadays we can use our Antenna Analyzers of course).

The method of coupling to the dip oscillator is important. Traps from the AV series of antennas require capacity coupling because the coil is shielded. Place a trap on an insulated surface (large cardboard box) and couple your dip oscillator meter (GDO) to the trap as shown below. Be careful to follow directions explicitly.

Capacitive Coupling

For capacitive coupling the tip of the GDO coil should be just slightly Inserted into the lower end of the aluminum tubing of the trap. Inductive coupling can be used where the coil is visible except for the TV trap where the dip can be found easier by capacity coupling. When checking dual frequency traps (TQ & TS), short the trap not under test to prevent obtaining a false reading. It should be noted that the dip meter frequency is lower than the operational frequency of a trap. This is caused because the trap will load the dip oscillator and lower it's frequency. You should use the listed oscillator frequencies as a guide. Temperature and humidity can have a +/- 100 KHz effect on traps. If the readings are within 100 KHz of the listed amounts, do not worry, the effect upon the assembled antenna will be minimal, Shorted turns or other serious defects will cause wide shifts from the norm. One or two megahertz is a definite indication of a bad trap. All coils are sealed and are difficult to repair properly. When all traps are checked and corrected, reinstall them in proper order, (as you previously marked them) and your multiband trapped vertical is now ready for action.

Inductive Coupling

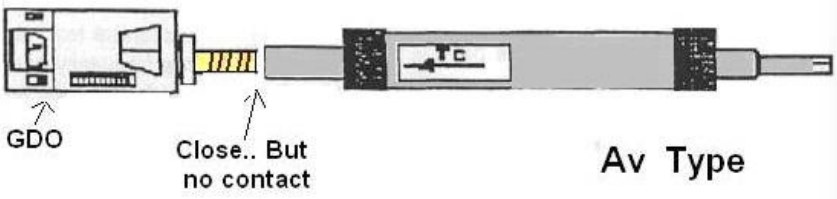
Below is part of an email received from Dick W5TA which contains more "hands on" experience of fixing traps.

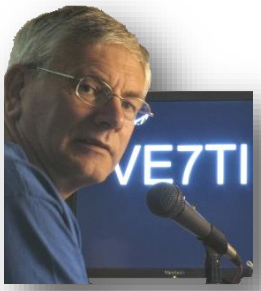
Getting ready for Field Day, I repaired an old HyGain tribander which belonged to our local radio club. We found that the connections of the copper wires in the trap coils to the screws connecting them to the aluminum tubing had seriously corroded. With most traps there is one or more retaining screws. After their removal you can pull off the end caps and pull the trap apart. It's an outer aluminum tube over a plastic inner rod serving as a coil form. Often you will find bug nests, insect carcasses and corrosion bridging turns of the coil as well as corrosion at the terminals and maybe the whole coil. If you rewind the coil, take care to first note the wire size and number of turns. With this, clean up and reassemble and you have a "good as new" trap.

~ Dick W5TA

A Grid Dip Oscillator (GDO)

Trap	Operating Freq	Oscillator Freq	Oscillator coupling
TF	28.8	27.87	Capacitive
TG	21.3	20.17	Capacitive
TH	14.2	12.92	Capacitive
TJ	7.20	5.81	Capacitive
TR	21.3	20.23	Capacitive
TQ	28.7	26.8	Inductive
	24.65	23.5	Inductive
TS	21.25	20.1	Inductive
	18.11	17.5	Inductive
TT	14.47	13.49	Inductive
TU	10.19	9.9	Inductive
TV	7.3	5.8	Capacitive





Back to Basics

John Schouten VE7TI

From The Basic Question Bank

A harmonic of such a wave is a wave with a frequency that is a multiple of the frequency of the original wave...

B-003-001-003 (D)

In designing an HF station, which component would you use to reduce the effects of harmonic radiation?

A. Dummy load

B. Antenna switch

C. SWR bridge

D. Low pass filter

The term harmonic is employed in various disciplines, including music and acoustics, electronic power transmission, radio technology, etc. It is typically applied to repeating signals, such as sinusoidal waves. A harmonic of such a wave is a wave with a frequency that is a multiple of the frequency of the original wave, known as the fundamental frequency. The original wave is also called the 1st harmonic, the following harmonics are known as higher harmonics. For example, if the fundamental frequency is 60 Hz, a common AC power supply frequency, the frequencies of the first three higher harmonics are 120 Hz (2nd harmonic), 180 Hz (3rd harmonic), 240 Hz (4th harmonic) and any addition of waves with these frequencies is periodic at 60 Hz.

Spurious emissions

Early in the development of radio technology it was recognized that the signals emitted by transmitters had to be 'pure'. Spark-gap transmitters were outlawed once better technology was available as they give an output which is very wide in terms of frequency. The term spurious emissions refers to any signal which comes out of a transmitter other than the wanted signal. In modern equipment there are three main types of spurious emissions: harmonics, out of band mixer products which are not fully suppressed and leakage from the local oscillator and other systems within the transmitter.

Harmonics

These are multiples of the operation frequency of the transmitter, they can be generated in any stage of the transmitter which is not perfectly linear and must be removed by filtering.

Avoiding harmonic generation

The difficulty of removing harmonics from an amplifier will depend on the design. A push-pull amplifier will have fewer harmonics than a single ended circuit. A class A amplifier will have very few harmonics, class AB or B more, and class C the most. In the typical class C amplifier, the resonant tank circuit will remove most of the harmonics, but in either of these examples, a low pass filter will likely be needed following the amplifier.

Removal of harmonics with filters

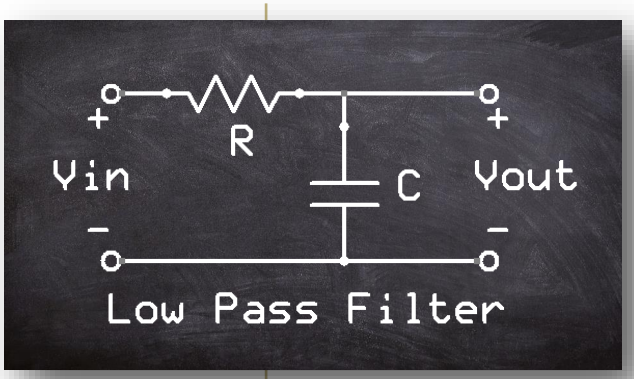
In addition to the good design of the amplifier stages, the transmitter's output should be filtered with a low pass filter to reduce the level of the harmonics. Typically the input and output are interchangeable and match to 50 ohms. Inductance and capacity values will vary with frequency. Many transmitters switch in a suitable filter for the frequency band being used. The filter will pass the desired frequency and reduce all harmonics to acceptable levels.

The harmonic output of a transmitter is best checked using an RF spectrum analyzer or by tuning a second receiver to the various harmonics. If a harmonic falls on a frequency being used by another communications service then this spurious emission can prevent an important signal from being received. Sometimes additional filtering is used to protect a sensitive range of frequencies, for example, frequencies used by aircraft or services involved with protection of life and property. Even if a harmonic is within the legally allowed limits, the harmonic should be further reduced.

Oscillators and mix products

When mixing signals to produce a desired output frequency, the choice of Intermediate frequency and local oscillator is important. If poorly chosen, a spurious output can be generated. For example if 50 MHz is mixed with 94 MHz to produce an output on 144 MHz, the third harmonic of the 50 MHz may appear in the output. This problem is similar to the Image response problem which exists in receivers.

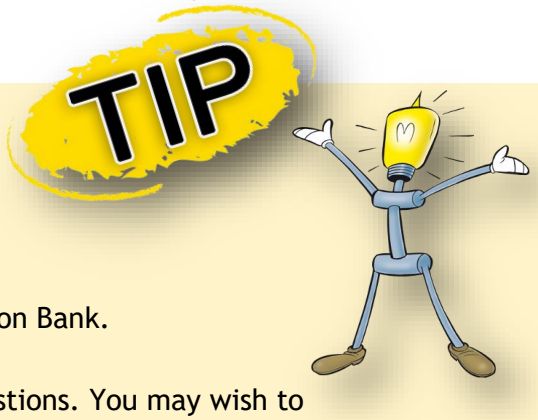
Looking at the possible answers above, *A. a dummy load* is not applicable as it takes the place of an antenna for tuning and servicing a transmitter. *B. An Antenna switch* merely switches antennas… and has nothing to do with harmonics. *C. An SWR bridge* measures reflected power, not harmonics, so *D. A low pass filter* remains.



A *low-pass filter* is a filter that passes signals with a frequency lower than a certain cutoff frequency and attenuates signals with frequencies higher than the cutoff frequency. The exact frequency response of the filter depends on the filter design. The filter is sometimes called a high-cut filter, or treble cut filter in audio applications. By attenuating (reducing) signals above the fundamental frequency we can effectively reduce harmonics.

The correct answer to our question therefore is **D Low pass filter.**

~ John VE7TI



Study Links

Whether you are new to the hobby or brushing up on skills, you may find these study links helpful:

1. RIC-7 is the entire up-to-date Industry Canada (IC) Basic Question Bank. http://tinyurl.com/CanadaBasicQB
2. There is a RIC-7 that has some explanations along with the questions. You may wish to review it as RIC-7 2014rev08.05 with explanations.
3. The Amateur Radio Exam Generator is at: https://www.ic.gc.ca/eic/site/025.nsf/eng/h_00040.html
4. The ExHaminer Study software for Windows is at: https://wp.rac.ca/exhaminer-v2-5/
5. The Ham Study website has a flash card approach to learning the Question Bank, both Basic and Advanced. It is at: https://hamstudy.org

The SEPAR Report

Roger Andrews VA7VH

Emergency Amateur Radio Support Across Canada

BC, as you may know, has PERCS (Provincial Emergency Radio Communications Service) which is strongly integrated with the BC Government

How well is amateur radio for emergencies supported by governments across Canada?

While looking online for inspiration for this months Communicator, I began to notice that there weren't many results when I googled certain word groups regarding governments, amateur radio, and emergencies. So that got me wondering what type of support different Provinces give to their Amateur Radio ARES groups and where British Columbia fits in. Yes, I know SEPAR isn't a typical ARES group, because we serve the City of Surrey first and foremost, to provide a communications link between the City and services within the City whose communications has failed. But that, in my view, is just an ARES group with a twist.

The results I discuss below are based on my Google search parameter of "amateur radio emergency [Province name or City name]". As I discuss this please remember, I'm talking about the support shown for amateur radio on government websites and not Radio Amateurs of Canada websites. There is no shortage of RAC and local club support for emergency communications in Canada.

BC, as you may know, has PERCS (Provincial Emergency Radio Communications Service) which is strongly integrated with the BC Government. The Emergency Radio Communications webpage of the BC government also lists Amateur Radio as a source of emergency communications. Several municipalities in BC actively support their Amateur Radio, for example - SEPAR in Surrey, and VECTOR in Vancouver. In the other jurisdictions, outside BC, there does not seem to be this support from government.

In Ontario, it seems more of a passing thought (at least when looking through the government websites). EmComm (Emergency Communications Ontario Association) lists Emergency Management Ontario as a support site, but Emergency Management Ontario, which is the governments site, does not reciprocated to EmComm. The City of Toronto in their emergency plan does include amateur radio, but it's hidden in a PDF document and not referred to on their City website like SEPAR is in Surrey.

In Alberta, Edmonton mentions Amateur Radio briefly on their City website. Calgary also mentions amateur radio on their City website but only to recognize that antenna structures need to have controls put on them. Nothing is said about the benefits amateur radio can provide in a disaster.

The province of Quebec has 4 words (3 words when translated to English) as a mention on the government website - "réseaux de radio-amateur" [Amateur Radio Networks]. This is under the heading of "Les partenaires de la municipalité" [The Partners of the Municipality] on their

separ

Surrey Emergency Program Amateur Radio

webpage discussing the role of municipal partners during an emergency.

I couldn't find any reference on provincial websites in Nunavut, Newfoundland, Saskatchewan or Manitoba.

Nova Scotia makes no mention of the role amateur radio would play in the provincial plan, but as a slight aside, there is a very good article on one of their journalism pages. It explains the benefits of Amateur Radio and how it was used during the crash of flight 111 in Peggy's Cove.

The Northwest territories like the City of Toronto only speaks of Amateur Radio in their Emergency Plan, which is again a PDF document. The discussion in the NWT plan only suggests that Amateur Radio should be part of the plan.

The Yukon Territory does mention amateur radio, and if their is integration with the government, I couldn't find it on their web pages.

It's a stark difference to BC where the Province links to PERCS and municipalities link to their Emergency Amateur Radio providers like SEPAR, VECTOR, Coquitlam, North Shore Emergency Management, etc.

It seems to me that it is important for the public to be aware of the inclusion of Amateur Radio in their emergency plans. While it's important to be written into the Emergency plan, most residents will never read that document. Many will read about it however, if it's published on the government websites, with a brief explanation of the benefits. Ideally, neighbourhoods should even be aware of the location of a neighbourhood ham operator so that they know they have a communicator at their disposal in an emergency. As it stand right now, at least in BC and Surrey especially, we are prominently integrated in emergency plans. Something I can't say for the majority of the country.

Remember that SEPAR conducts 2 weekly Nets:

Every Tuesday evening at 1930 hrs (7:30pm PDT) we start a ½ hour NET on a local repeater, provided by the Surrey Amateur Radio Club (SARC) on 147.360 MHz +600kHz and a tone of 110.9. There may be a simplex test or a test NTS message transmitted during the NET at the Net controllers discretion. This is an excellent opportunity to practice sending and receiving this form of messaging. Besides, it adds a little spice to the regular check-ins on the net. Please join us. NTS Radiograms can be found on the SEPAR website.

Thursday nights at 19:30 hours, we only provide Simplex operations starting on frequency 146.550 and changing frequencies and bands for further signal checking. During these tests, we encourage those with mobile or hand held capabilities to try different locations each time to become more knowledgeable as to what to expect in a real disaster. We are unable to predict where we will be located when we are needed. Additional training sessions and practice exercises are scheduled throughout the year including participation with other departments and agencies.

73

~ Roger VA7VH
SEPAR Secretary

...it is important for the public to be aware of the inclusion of Amateur Radio in their emergency plans.

Kalmar Koffee Klatch Reminder

The SARC Weekly Koffee Klatch is on Saturday at the Kalmar Restaurant at 80th and King George Hwy in Surrey at 9:00 am. Bring your significant other, bring your family, see old friends and have fun.

Adam's Tech Topics

Adam Foley N1RKW

The Story Of JC Bose

When asked who the father of radio is, most people will either answer "Tesla" or "Marconi"

It's finally time, the end is nigh.

However, before we get to that let's take a look at amateur radio history. What makes us so amateur? Why "ham radio" and not "turkey radio" or just "you unprofessional jerks"? Why has amateur radio been so well protected over the years? Who started it all? And why? What is actually meant by "200 Meters and Down"? Why am I asking so many silly questions?

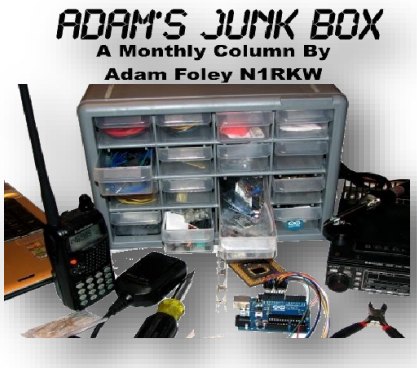
Let's begin by looking at the "invention" of radio, though we all know now that electromagnetic radiation, aka radio, aka light, exists with or without us and has since the birth of this universe.

When asked who the father of radio is, most people will either answer "Tesla" or "Marconi". The Tesla people will then square off against the Marconi people, and a brawl will ensue. What would you think if I said that both groups were likely wrong and were fighting for no reason? What would you think if I told you that some people, myself included, would answer "Bose" instead?

The fact of the matter is that there were a number of people experimenting with radio and similar technologies in the years leading up to the turn of the 20th century, so calling any one of them the "father of radio" is a bit ridiculous. By 1895, Marconi had transmitted a signal about a half-mile, Tesla had already demonstrated "wireless power" (which we now know was a massive broadband RF field), and J.C. Bose had demonstrated radio waves propagating through walls, people, and other objects as well as radio control... At 60 Frickin' Gigahertz!!!

Professor JC Bose

Jagadish Chandra Bose was a number of different things: a physicist, a biologist, a biophysicist, a botanist, an archeologist, a man who fought a racist system and won, a professor of physics, an Acharya (Indian instructor in religious matters), a science fiction author, and most particularly, he was ahead of his time. Not bad, not bad at all.



Guest Columnist Adam Foley N1RKW is a member of the Central New Hampshire Amateur Radio Club and contributes a monthly column "Adam's Junk Box" to their newsletter, also called The Communicator.

Adam also has a YouTube Channel

He may have even beat Marconi to the punch with a public demonstration of radio before Marconi's own first public demonstration, potentially making him the "real" "father of radio"...

Hey! Stop brawling, you guys!

...Unfortunately, according to my research, there is some confusion regarding the dates of those two events, so I was unable to tell who had actually first demonstrated "wireless", as radio was called back then. See? I told you that all the brawling was for nothing!

JC Bose actually invented many of the things we commonly utilize when dealing with microwave radio. Waveguides, polarizers, horn antennas, parabolic reflectors, semiconductor detectors/rectifiers, and many other things that we take for granted today were invented by Professor Bose during his research on microwave radio. Even more amazingly than that, he refused to patent most of his inventions, making him an early proponent of what is now referred to as "open source hardware". He believed that ideas should be shared freely, a rather unusual idea at the time, and one that others, Marconi included, took advantage of by including some of Bose's work in their own inventions and patents without giving Bose any of the credit he deserved.

Much as I appreciate Bose for his amazing work, he is certainly not the only person who's work furthered the cause of radio, and by the turn of the 20th century radio looked like it could become the "next big thing", scientifically speaking. Of course, the next big thing actually turned out to be aviation. However, radio was also becoming a big thing, and there were at least as many people mucking around with spark gap transmitters and coherers at that time as there were people strapping themselves into flimsy aircraft made from twigs and cloth and hurtling themselves into the heavens.

Some of these people were working on commercial radio projects, some were working on military and/or maritime radio projects, and some were just playing around for the sheer ever living heck of it. The first two categories of radio experimenters naturally hated the third category, as they tended to interfere with what the others thought of as "important" radio. The interference issue was often made worse by the fact that in many cases the amateur actually had the more powerful station, and both were trying to utilize the same chunk of spectrum. Since there were no laws in place to say otherwise, the amateurs felt as though they had just as much right to the airwaves as the commercial stations did (for the sake of simplicity, I will be referring to all non-amateur stations as commercial, be they commercial, military, maritime, or whatever), and they were technically correct. Unfortunately, that led to some feeling superior and refusing to stop transmitting so that the commercial stations could go on-air. These earliest amateur radio experimenters often acted like darn fools and nearly ruined it for the rest of us, the schmucks.

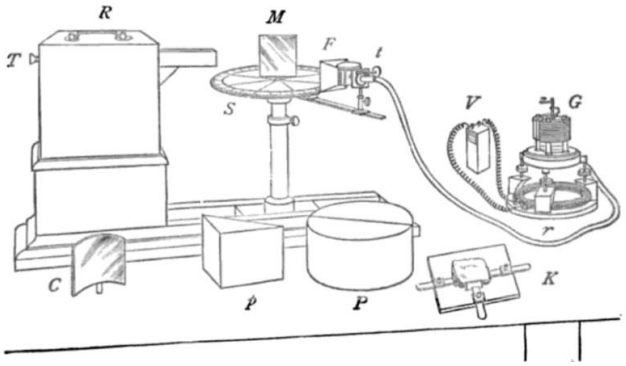


Diagram of a microwave receiver and transmitter apparatus from Bose's 1897 paper.

A quick side note: At this time, roughly between 1900 and 1910, there really wasn't any such thing as "tuning" your radio. Transmitted wavelength was determined by the size of the antenna and what equipment the station had. The transmitters were all of spark gap type, which transmitted across huge swaths of spectrum. Sharing air space was necessary for anyone to be able to use radio at all.

…why has amateur radio been so well protected over the years?

This may be when the word "ham" started becoming associated with amateur radio. The exact origin is apparently unknown, but there are several theories. One of those, and the one I think is the most likely origin, is that people whose fist (their Morse Code sending technique and style) was considered unprofessional by the "professionals", were referred to as "ham fisted". This term is believed to have originated with wire telegraph operators, but it naturally lent itself to radio operators as well, remembering that almost all radio at this time was done via Morse Code.

This was a time of amazing technological progress where radio was concerned, and much of that progress was coming from these same experimenters and then funneled down to the commercial stations. In 1912, the first law that actually had an effect on amateur radio was put in place, which specified that private (amateur) stations could not use frequencies other than those between 150 and 200 meters (1.5 to 2.0 MHz) without special permission. The belief at that time was that the longer the radio wavelength, the more useful it was. Ships often operated at 450 to 600 meters (roughly 500 KHz to 650 KHz) due to limitations of antenna length, but some commercial stations were operating at 1600 meters or more (185 KHz or less, remembering that wavelength and frequency are inversely proportional). The feeling was that if amateurs were relegated to the "useless" frequencies at and below 200 meters, they would die out and stop being a thorn in the side of the commercial interests.

Yeah, that worked well, didn't it?

The lawmakers and lobbyists had failed to account for the sheer tenacity of amateur radio operators. Also, the science of the day was completely unaware of stratospheric propagation, which was discovered shortly thereafter by those same amateurs.

By the early 1920s, hams were using the "useless" frequencies that they had been assigned as a way to get rid of them entirely to establish regular 2-way communications between North America and Europe. Spark gap transmission was by this time on its way out of popular use, so it was possible for many amateur radio operators to share their "narrow" 50 meter wide allocation. The radios of the time were using vacuum tubes instead of spark gaps, so not only could they now tune their radios, use a narrow amount of bandwidth, but could also use "radiotelephone" communications in addition to Morse Code, what we now refer to as "phone" or "voice".

While not all advances of the time came from amateur radio, much of them did and the commercial radio operators took notice. Naturally, new laws were put in place to limit amateur activity to narrower and narrower portions of spectrum as time went on. For a time we had access to all possible bands (before laws had been put in place), then we were limited to 150M to 200M (1.5 to 2.0 MHz), after that we had a few HF bands and everything above roughly 115 MHz, and then after WWII we were allotted most of the bands we have now. Later several small HF bands were added (the WARC bands), but things haven't changed much in the last 70 years or so, at least not in terms of bandplans. Technology has, of course, come a long, long way since then, giving us access to modes and frequencies that couldn't even have been imagined by the forerunners of our hobby.

One of the questions I asked at the beginning of this article is why has amateur radio been so well protected over the years? Many times over the course of the last hundred years, amateur radio could have easily been regulated out of existence, and nearly was several times. In mid 1914, the American Radio Relay League (ARRL) was formed by members of the Radio Club of Hartford (Connecticut), including the famous Hiram Percy Maxim. The ARRL, as

well as similar organizations in other parts of the world, have been active ever since protecting amateur radio from those who would rather see our rather valuable portions of the electromagnetic spectrum get gobbled up by those that want them for their own commercial/government use. Whether you love the ARRL or hate it, all of us owe a debt of gratitude to it for their efforts in preserving the hobby from annihilation.

This little chunk of ham radio history was brought to you by the book 200 Meters and Down by Clinton B. DeSoto, Wikipedia, and the number seventy-three. I hope that you have enjoyed reading a bit about early radio and some of the things that happened to shape our hobby into the incredible thing that it is today. As I've said many times to many people, ham radio has something for everyone. This is possible now because of early scientists and radio pioneers, as well as people who went to bat to protect our hobby.

And this is where my role as an article writer comes to an end. I have been writing these articles since August of 2014. I have provided you with 32 articles to read on subjects varying from basic electronics, to DIY antenna construction, to amateur radio history. I hope that this is enough, as I have given it my all.

As some of you may be aware, my health is not good. I have a number of issues that I will spare you the details on, but suffice it to say that they are progressive illnesses. That means that I will only get worse as time goes on. These illnesses have left me weak, and things that I used to be able to do easily now only come with great difficulty. Sadly, this includes writing. I have enjoyed writing these articles immensely, and have been thrilled at the positive responses I've received from you. I wish I could continue to do this on a monthly basis, but that is just no longer possible. This is why last month's article was a reprint. I was simply unable to complete the article that I had started to write for March. I may still submit articles to the Communicator from time to time, but the monthly column called Adam's Junk Box is officially done at this time.

Thank you all for reading my articles, I appreciate it more than words can express.

Farewell and best regards,

~ Adam Foley N1RKW
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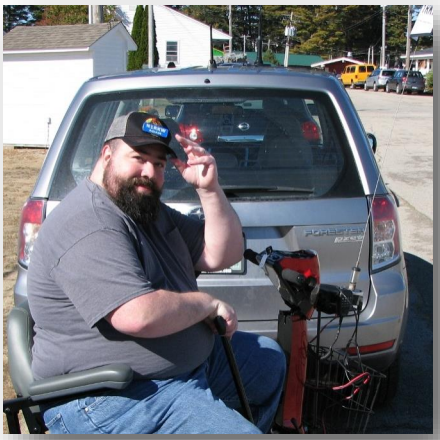


Adam Foley N1RKW has been around ham radio most of his life, but didn't smarten up and get his license until 2008. Since then he has gone on to great heights (the 12' high roof of his old house, and the 3rd floor apartment he's in now), and decided to take up writing a monthly column about ham radio and electronics, two of the subjects he knows a little bit about (but not much). He lives in Laconia, NH with his incredibly tolerant wife and equally tolerant son and can be reached by email via N1RKW at hotmail dot com.

I'd like to thank Adam for his many insightful articles, they have been a welcome addition to The Communicator. We're sorry to lose him as a regular contributor but we will publish at least two more of his earlier articles to finish off this publication year.

Adam, we wish you all the best, we'll miss you… and a heartfelt Thank You.

John VE7TI,
SARC Communicator Editor

Radio Amateurs of Canada / Radio Amateurs du Canada

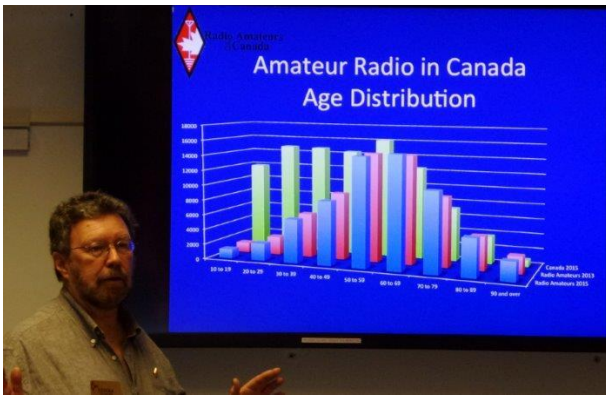
Allan Munnik VA7MP

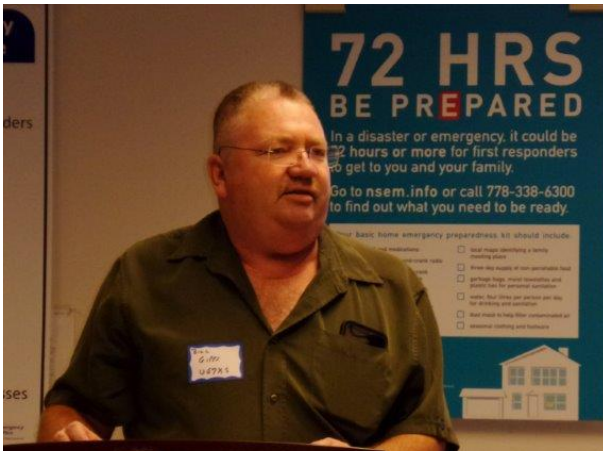
I am proud to announce that as of January 1 2017, I have been installed as the new Director for British Columbia / Yukon. I plan on attending many of the club meetings and swap meets as time allows.

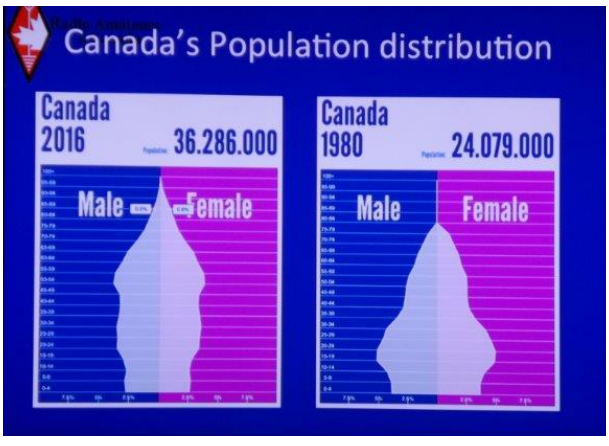
The President of RAC (Radio Amateurs of Canada), Mr. Glen MacDonell *(photo left)* was in the Lower Mainland for 4 days at the end of February for a meeting with Innovation, Science and Economic Development Canada, previously known as Industry Canada. During Glen's visit I was fortunate enough to attend these meetings, as well as meeting with the North Vancouver Amateur Radio Club, and VECTOR.

During the meeting with the North Vancouver Amateur Radio Club, the previous Director for BC / Yukon, Mr. Bill Gipps VE7XS *(photo right)* was awarded with a plaque commemoration his 7 years of service as the Director.

While we are on the subject of Bill Gipps, Bill along with members of the Delta Amateur Radio Club, were instrumental in having the Distracted Diving Law interpreted in a positive way for Amateur Radio, Search and Rescue Personnel, and others wishing to use a microphone to communicate while driving.



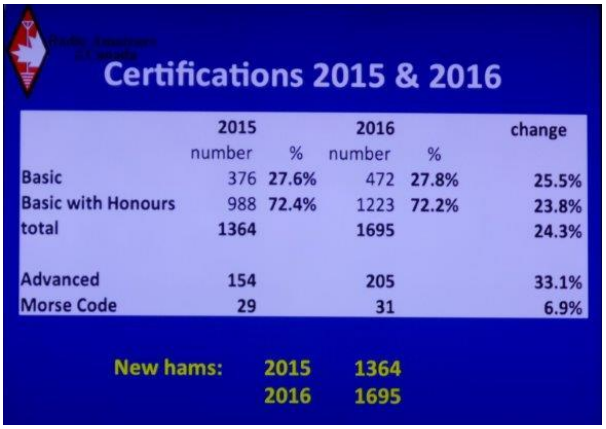




The law was not changed, but the wording was clarified so that there would be no confusion regarding the interpretation. YES it is legal to use your mic to communicate while driving, even if the mic has more than one button, as long as the other buttons are not being used.

It is recommended that you look on the following website for the information and have a copy of the information and your Ham License in your vehicle.
http://www2.gov.bc.ca/assets/gov/driving-and-transportation/driving/publications/electronic-devices-while-driving.pdf.

~ Allan Munnik VA7MP



SARC
Surrey Amateur Radio Club

SURREY AMATEUR RADIO CLUB 2017 RDF Foxhunt

Saturday May 20, 2017 at Crescent Park, South Surrey

Pre-Hunt Coaching, Registration & Instructions 0900 - 1000
Foxhunt commences at 1000 with barbeque at 1200

To participate, you need a 2 m handheld radio with directional antenna. For those who have built kits, an 80 m foxhunt is also planned. However, if you are a beginner or don't have a radio, then come anyhow! You can be part of a more experienced team or we will have equipment that you can use.

Talk-in 147.360+ (110.9 tone)

FOXHUNT – NO CHARGE;
BARBEQUE $10

All are welcome, but we ask that you RSVP Anton James VE7SSD jamesadf77@shaw.ca and indicate if you plan to attend the foxhunt or BBQ or both

Check It Out

John Schouten VE7TI

Morse Teaching Software

Proficiency in CW is a matter of repetition and practice

Morse Toad is an app that teaches Morse code through a series of simple lessons and exercises. Based on the proven Koch method, letters are learned one at a time, at full speed, and when the player demonstrates their mastery of the new letter, another is added until the full alphabet is learned. The Apple iOS version is shown but Android is also available. This is the one I've had the most success with refreshing my rusty CW, though the interface looks a bit old school.

WinMorse My choice for Windows computers. Convert text into Morse code. It does this by reading text from one of three sources: the Windows clipboard, a file, or you may directly type the text. WinMorse outputs the Morse code as a standard windows wav file

MorseCat A freeware windows Morse code trainer for beginners and experts by DK5CI

Code Quick Master Code In 30 Days it says... Maybe.

Super Morse Super Morse is the original comprehensive Morse Code training program for the PC. Super Morse permits the user to learn the Morse characters in a very orderly way using several different methods, including one unique to Super Morse; build speed with special exercises

CWT a Morse code learning program for MSDOS by DK5LI

CW Player Simple freeware program generates Morse characters and Q codes. It needs a sound card and Win95.

Morse99 the industry standard Morse code tutorial for pilots in the UK. Fully windows compatible with sound card support.

Ham University Ham University includes Morse Code lessons, graded exercises, and a game.

Morse Code Morse Code Training, Practice and Exam Program by Stormy Weather SoftWare Ltd

RufzXP RufzXP is a free training software for improving code speed and CW practice, particularly (ultra) high speed memory copying of true amateur radio calls.

Morse Academy Online documentation and overview about Morse Academy, shareware CW learning software

Codemaster V Reputation as the Morse code training package for either the newcomer to Morse code, or the experienced user who wants to improve his or her receiving skills

Morse Pilot Morse Pilot is a popular and very comprehensive freeware Morse code tutor, trainer with decoder and encoder functions. Morse Pilot is intended for personal training, for example for radio ham or aviation examinations.

Koch Method CW Trainer Based on the Koch Method as described by David G. Finley, N1IRZ, this software allows you to start out at the full speed you want to achieve by learning two letters and adding an additional letter once you reach 90% proficiency.

~ John VE7TI

April 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		For details on all SARC events, go to ve7sar.net For details on all SEPARS events, go to separ.shutterfly.com/calendar				1 0900 Klub Koffee Klatch: Kalmar Family Restaurant, King George Blvd & 81st Ave. CONTEST: EA RTTY Contest (RTTY)
2	3	4 **1930 SEPAR Net** **2000 SARC Net** Basic Ham Class	5	6 1930 SEPAR Simplex Check-in	7	8 0900 Klub Koffee Klatch: Kalmar Family Restaurant Richmond ARC Swap meet
9 	10	11 **1930 SEPAR Net** **2000 SARC Net** Basic Ham Class	12 **1900 SARC General Meeting**	13 1930 SEPAR Simplex Check-in	14 Good Friday	15 0900 Klub Koffee Klatch: Kalmar Family Restaurant CONTEST: CQ Manchester Mineira DX Contest (CW) Ontario QSO Party (CW, SSB)
16 Easter CONTEST: ARRL Rookie Roundup (SSB) CQ Manchester Mineira DX Contest (CW) Ontario QSO Party (CW, SSB)	17	**WORLD AMATEUR RADIO DAY** **1930 SEPAR Net** **2000 SARC Net** **Please Check-In** Basic Ham Class	19 **Field Day Meeting** (Tentative)	20 1930 SEPAR Simplex Check-in	21	22 0900 Klub Koffee Klatch: Kalmar Family Restaurant Seattle Emergency Communications Academy Antenna Workshop 1
23 Seattle Emergency Communications Academy	24	25 **1930 SEPAR Net** **2000 SARC Net** Basic Ham Class	26 **SARC Exec Meeting**	27 1930 SEPAR Simplex Check-in	28	29 0900 Klub Koffee Klatch: Kalmar Family Restaurant Antenna Workshop 2

Contest Details: http://hornucopia.com/contestcal/contestcal.html

CLUB EXECUTIVE 2015-2016

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Sheldon Ward VA7XNL (Repeater Manager)
Bill Gipps VE7XS
Mike Plant VE7AT

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ve7sar.net

Between newsletters, watch your e-mail for announcements of events, monthly meetings and training opportunities. These announcements can also be found on our web page, or via:

Twitter
@ve7sar

FaceBook
SurreyAmateurRadio

Our YouTube Channel
SurreyARC

SARC Photo Albums
Web Albums
or
tinyurl.com/SARCphoto

QRT

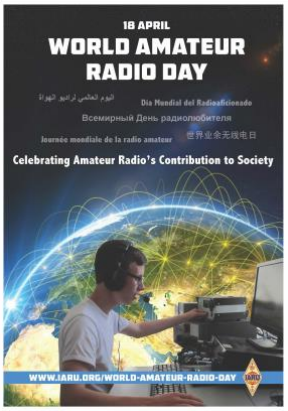
John Schouten VE7TI

World Amateur Radio Day

Every April 18, radio amateurs worldwide take to the airwaves in celebration of World Amateur Radio Day. It was on that day in 1925 that the International Amateur Radio Union was formed in Paris.

Amateur Radio experimenters were the first to discover that the short wave spectrum — far from being a wasteland — could support worldwide propagation. In the rush to use these shorter wavelengths, Amateur Radio was "in grave danger of being pushed aside," the IARU's history has noted. Amateur Radio pioneers met in Paris in 1925 and created the IARU to support Amateur Radio worldwide.

Just two years later, at the International Radiotelegraph Conference, Amateur Radio gained the allocations still recognized today — 160, 80, 40, 20, and 10 meters. Since its founding, the IARU has worked tirelessly to defend and expand the frequency allocations for Amateur Radio. Thanks to the support of enlightened administrations in every part of the globe, radio amateurs are now able to experiment and communicate in frequency bands strategically located throughout the radio spectrum. From the 25 countries that formed the IARU in 1925, the IARU has grown to include 160 member-societies in three regions. IARU Region 1 includes Europe, Africa, the Middle East, and Northern Asia. Region 2 covers the Americas, and Region 3 is comprised of Australia, New Zealand, the Pacific island nations, and most of Asia. The International Telecommunication Union (ITU) has recognized the IARU as representing the interests of Amateur Radio. Today, Amateur Radio is more popular than ever, with over 3,000,000 licensed operators!



World Amateur Radio Day is the day when IARU Member-Societies can show our capabilities to the public and enjoy global friendship with other Amateurs worldwide.

Those active on Social Media, can promote the event by using the hash tag #WARD2016 on Twitter and Facebook. IARU will list all WARD activities on their home page.

April 18 is the day for all of Amateur Radio to celebrate and tell the world about the science we can help teach, the community service we can provide and the fun we have.

It falls on a Tuesday this year so we should make a point of having an extra special turnout on our Net. Please spare some time and tune in to check in to join in the fun and education that is World Amateur Radio Day! 73

~ John VE7TI
Communicator Editor

It's April!

At our meeting on April 12th we look forward to Dave Johnson VE7VR, President of the Orca Club making a presentation on contesting and DXing. Dave was licensed in 1969 at the age of 16. After a stay in Botswana, the result of his father's work, he eventually settled in British Columbia in 1980 but was unable to erect anything more significant than a vertical until 1992 when he moved into a house with his wife and seven-year-old daughter.

Within a month of moving in, he installed a 65' tower with a Cushcraft A4S c/w 40M option and was finally on the air with a directive antenna.

Not much has changed in the last 10 years with the antenna but there is now a FT1000MP MK-V transceiver as the main radio. Dave's radio activities consist of DXing on 10M thru 80M and operating various DX contests as a casual participant.

SARC hosts an Amateur Radio net each Tuesday evening at 8 PM. Please tune in to the VE7RSC repeater at 147.360 MHz (+600 KHz) Tone=110.9, also accessible on IRLP node 1736 and Echolink node 496228.

On UHF we operate a repeater on 443.775MHz (+5MHz) Tone=110.9 or IRLP Node 1737.

	SARC Net 20:00 Hrs
1st Tuesday Standby	Drew VA7DRW Rob VE7CZV
2nd Tuesday Standby	Jinty VA7JMR Sheldon VA7XNL
3rd Tuesday Standby	Rob VE7CZV Vacant
4th Tuesday Standby	Kapila VE7KGK John VA7XB
5th Tuesday Standby	Robert VA7FMR Rob VE7CZV
Want a turn at Net Control? Contact the SARC Net Manager	

Down The Log…

SARC Monthly Meetings

2nd Wed. (Sept-Jun)
1900 hr at the PREOC
Emergency Mgmt BC
14292 Green Timbers
Way, Surrey, BC

Weekly Club Breakfast

Saturday at 0900 hr
Kalmar Family Restaurant
8076 King George Blvd.
Surrey

SARC Net

Tuesday at 2000 hr local
on 147.360 MHz (+)
Tone=110.9

SEPARS Net

Tuesday at 1915 hr local
on 147.360 MHz (+)
Tone=110.9

VE7RSC Repeaters

2m: 147.360MHz+
Tone= 110.9Hz
IRLP node 1736
Echolink node 496228

1.2m: 223.960 Mhz -1.6
Tone=110.9

70cm: 443.775MHz+
Tone= 110.9Hz
IRLP node 1737

We Have A SARC Patch!

These are suitable for sewing on a jacket, cap or your jammies, so you can proudly display your support for the club.

The price is $4 each or three for $10 and they can be picked up at a meeting or the weekly Koffee Klatch.

We thank our sponsors for their SARC support.

Please support them.